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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/499,951	02/08/2000	TATSUO J. CHIGIRA	B208-1076	1936

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EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 05/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/499,951

Applicant(s)

CHIGIRA, TATSUO J.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 5, 6 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on 3/1/2002 is entered. The rejections of claims 1-10 are maintained.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1-4, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan et al hereinafter Fan (US 5,815,126) in view of Saikawa et al hereinafter Saikawa (US 5,986,813).**

As to claim 1, Fan teaches a head mounted display (HMD) apparatus 1 which includes front section 15 (front frame), side frame 32 L and 32 R, the hinge 31 L and 31 R, two end member 38. Attached to each side of the head mounted display body 12 is a

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stem 30 through a respective forward hinge 31. Each stem contains a forward stem section 32, which is coupled to the forward hinge 31 at the proximal end. In a particular preferred embodiment, the forward stem section 32 contains a rear hinge 33 at the distal end and an earphone storage compartment 37 into which earphones 40 are stowed when the stems are folded (see col. 6, lines 54-61). At figure 1, Fan fails to teach a mounted pad is disposed opposite to a forehead of a user. However, at figure 52A, Fan teaches a person wearing magnifying glasses equipped with a display. The glasses 1905 are secured to the wearer's head by a headband 1902 (a mounted pad is disposed opposite to a fore head of a user as claimed, col. 23, lines 7-8). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the additional headband 1902 taught by Fan at Figure 52A for the HMD 1 of Figure 1 because this would hold the forehead or the wearer's head in a fix position.

Therefore, Fan teaches all of the claimed limitation of claim 1, except for "the forehead of the user by pressing the mount pad to the forehead of the user by an elastic force generated by spreading the side frames." However, Saikawa teaches a related HMD 1 which includes frame section 1b (side frame) to the body section 1a to a side head section behind an ear 1e (two end) and including a plate spring being an elastic member (elastic force) and others to serve as a supporting section and a side head pressing section (the forehead of the user by pressing the mount pad to the forehead of the user by an elastic force generated by spreading the side frames as claimed, see col. 6, lines 15-18). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include the additional elastic member taught by Saikawa in the

HDM of Fan's system because this would allow user to wear the HDM more comfortable and light weight (see col. 3, lines 16-18 of Saikawa).

5. As to claim 2, Fan teaches earphone storage compartments 37 into which earphones 40L and 40R are stowed when the stems are folded (earphone holding members arranged on a side frames to hold earphones, see col. 6, lines 59-61).

6. As to claim 3, Fan teaches inherently the compartment 37, which hold a cable 320, connected to display channel part (see col. 7, lines 47-67).

7. As to claim 4, Fan teaches a display pod 1100 and a side frame 1915 are stowed on an inner side of a front frame (see figure 53, col. 23, lines 21-34). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate a display pod 1100 taught by Fan at figure 53 for the HMD 1 of Figure 1 because this would be shock resistant and impact (see col. 23, lines 29-34 of Fan).

8. As to claim 7, Fan teaches a head mounted display (HMD) apparatus 1 which includes front section 15 (front frame), side frame 32 L and 32 R, the hinge 31 L and 31 R, two end member 38. Attached to each side of the head mounted display body 12 is a stem 30 through a respective forward hinge 31. Each stem contains a forward stem section 32, which is coupled to the forward hinge 31 at the proximal end. In a particular preferred embodiment, the forward stem section 32 contains a rear hinge 33 at the distal end and an earphone storage compartment 37 into which earphones 40 are stowed when the stems are folded (see col. 6, lines 54-61). At figure 1, Fan fails to teach a mounted pad is disposed opposite to a forehead of a user. However, at figure 52A, Fan teaches a person wearing magnifying glasses equipped with a display. The

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glasses 1905 are secured to the wearer's head by a headband 1902 (a mounted pad is disposed opposite to a fore head of a user as claimed, col. 23, lines 7-8). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the additional headband 1902 taught by Fan at Figure 52A for the HMD 1 of Figure 1 because this would hold the forehead or the wearer's head in a fix position. Therefore, Fan teaches all of the claimed limitation of claim 7, except for "said head mounted display apparatus being capable of being mounted and held on the head of user with an elastic force generated by spreading said side frame." However, Saikawa teaches a related HMD 1 which includes frame section 1b to the body section 1a to a side head section behind an ear and including a plate spring being an elastic member and others to serve as a supporting section and a side head pressing section (see col. 6, lines 15-18). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include the additional elastic member taught by Saikawa in the HDM of Fan's system because this would allow user to wear the HDM more comfortable and light weight (see col. 3, lines 16-18 of Saikawa).

As to claim 9, Fan teaches a cable 52.

As to claim 10, Fan teaches a head mounted display (HMD) apparatus 1 which includes front section 15 (front frame), side frame 32 L and 32 R, the hinge 31 L and 31 R, two end member 38. Attached to each side of the head mounted display body 12 is a stem 30 through a respective forward hinge 31. Each stem contains a forward stem section 32, which is coupled to the forward hinge 31 at the proximal end. In a particular preferred embodiment, the forward stem section 32 contains a rear hinge 33 at the

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distal end and an earphone storage compartment 37 into which earphones 40 are stowed when the stems are folded (see col. 6, lines 54-61). At figure 1, Fan fails to teach a mounted pad is disposed opposite to a forehead of a user. However, at figure 52A, Fan teaches a person wearing magnifying glasses equipped with a display. The glasses 1905 are secured to the wearer's head by a headband 1902 (a mounted pad is disposed opposite to a fore head of a user as claimed, col. 23, lines 7-8). It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the additional headband 1902 taught by Fan at Figure 52A for the HMD 1 of Figure 1 because this would hold the forehead or the wearer's head in a fix position.

Therefore, Fan teaches all of the claimed limitation of claim 10, except for "said head mounted display apparatus being capable of being mounted and held on the head of user with an elastic force generated by spreading said side frame." However, Saikawa teaches a related HMD 1 which includes frame section 1b to the body section 1a to a side head section behind an ear and including a plate spring being an elastic member and others to serve as a supporting section and a side head pressing section (see col. 6, lines 15-18). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include the additional elastic member taught by Saikawa in the HDM of Fan's system because this would allow user to wear the HDM more comfortable and light weight (see col. 3, lines 16-18 of Saikawa).

9. Claims 5, 6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 1, 7 and 10 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 5,880,773) in view of Saikawa et al hereinafter Saikawa (US 5,986,813).

As to claims 1, 7 and 10, Suzuki teaches, referring to Fig. 1, a HMD 1 that includes a housing 5 (front frame), the side cases 6 and 7 (side frame), the earphone 9 attached to the side cases 6 and 7 (see col. 3, line 10). Therefore, Suzuki teaches all of the claimed limitations of claim 1, except for "said head mounted display apparatus being capable of being mounted and held on the head of user with an elastic force generated by spreading said side frame." However, Saikawa teaches a related HMD 1 which includes frame section 1b to the body section 1a to a side head section behind an ear and including a plate spring being an elastic member and others to serve as a supporting section and a side head pressing section (see col. 6, lines 15-18). At a forehead supporting point P2 the forehead resting section 1d is brought into contact with the forehead (a mount pad is disposed opposite to a forehead of a user as claimed, col. 6, lines 41-43), and two end elements 1e. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the auxiliary support elastic member taught by Saikawa in the HMD of Suzuki's system because this would allow user to wear the HDM more comfortable and light weight.

Response to Arguments

11. Applicant's arguments filed 3/1/2002 have been fully considered but they are not persuasive.

In response to applicant's argument that claims 1, 7 and 10 recites "a mount pad is disposed opposite to a forehead of a user." This argument is not persuasive because Fan's invention teaches "a person wearing magnifying glasses equipped with a display. The glasses 1905 are secured to the wearer's head by a headband 1902." Saikawa's invention teaches "at a forehead supporting point P2 the forehead resting section 1d is brought into contact with the forehead." These arguments are not persuasive because it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the additional headband 1902 taught by Figure 52A for the HMD 1 of Figure 1 because this would hold the forehead or the wearer's head in a fix position. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the auxiliary support elastic member taught by Saikawa in the HMD of Suzuki's system because this would allow user to wear the HDM more comfortable and light weight.

In response to applicant's argument that claims 1, 7 and 10 recites "said head mounted display apparatus being capable of being mounted and held on the head of user with an elastic force generated by spreading said side frame." This argument is not persuasive because Saikawa's invention teaches "a related HMD 1 which includes frame section 1b to the body section 1a to a side head section behind an ear and including a plate spring being an elastic member and others to serve as a supporting section and a side head pressing section (see col. 6, lines 15-18)." These arguments are not persuasive because it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the auxiliary support elastic member

taught by Saikawa in the HMD of Suzuki's system because this would allow user to wear the HDM more comfortable and light weight.

For these reasons, the rejections based on Fan et al, Suzuki and Saikawa et al have been maintained.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on M-F (9:00-5:00), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Examiner
Art Unit 2674


ULKA J. CHAUHAN
PRIMARY EXAMINER